IDAHO
DEPARTMENT OF FISH AND GAME

Jerry M. Conley, Director

HAGERMAN HATCHERY

Annual Report

1 October 1981 - 30 September 1982

by

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Fish Hatchery Superintendent III

November 1983

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HAGERMAN HATCHERY

ABSTRACT

The objective of Hagerman Hatchery was to raise 465,000 pounds of rainbow, cutthroat and brown trout and coho and fall chinook salmon for streams, lakes and reservoirs throughout Idaho, but because of an outbreak of Proliferative Kidney Disease (PKD), the production was decreased to approximately half of-this figure. PKD was originally found in Europe but not in the United States until it was detected at Hagerman State Fish Hatchery. In an attempt to keep the disease isolated to this station, 804,000 rainbow trout weighing 80,000 pounds were destroyed. The raceways containing these fish were sterilized with chlorine.

Hagerman Hatchery stocked 1,232,771 rainbow trout weighing 232,260 pounds from fish reared at this station. Because of this lower than normal production, a total of 1,792,365 rainbow, cutthroat and brown trout and coho and fall chinook salmon weighing 76,011 pounds were transferred to this station and redistributed.

We fed 710,740 pounds of feed with a conversion of 2.6 pounds of feed to produce a pound of fish. The high feed conversion was due to the PKD outbreak. The cost per pound of fish produced was 71¢.

Author:

Bud Ainsworth
Fish Hatchery Superintendent III

OBJECTIVES

1. To raise 465,000 pounds of rainbow, brown and cutthroat trout and coho and fall chinook salmon for streams, lakes and reservoirs throughout Idaho.

2. To assist in increasing or maintaining harvest levels and populations of these species for fishing or recreational use in all waters of the state.

INTRODUCTION

Hagerman Hatchery is located in southcentral Idaho in Gooding county, In a valley near the Snake River, three miles southeast of the town of Hagerman. It receives its water supply from Tucker Springs and Riley Creek and requires 115 cfs of water to operate at full capacity.

The hatchery facilities include 24 raceways, 570 feet long, varying in width from 6 feet to 15 feet; 18 fingerling raceways, 2 1/2 feet x 100 feet and 28 concrete vats **in** the incubation building, 3 feet x 15 feet.

The hatchery is capable of rearing 600,000 pounds of salmonids with_the present stocking schedule.

FISH PRODUCTION

Rainbow Trout

Rainbow trout is the primary species reared at Hagerman Hatchery. At the start of the fish year we had on hand 2,388,185 fish weighing 95,500 pounds: and ended the fish year with 2,366,663 fish weighing 86,500 pounds.. The hatchery received 4,132,798 eggs from Aqua Life Corporation, Mount Whitney (California) and Arlee (Montana). From these eggs were planted 1,232,771 fish weighing 232,260 pounds and also destroyed 804,000 PKD infected fish. We also transferred 132,102 fish weighing 25,156 pounds to Mackay, Eagle, McCall and Kamiah hatcheries.

Grace, Nampa, American Falls and Hayspur hatcheries transferred to Hagerman Hatchery 96,120 rainbow trout weighing 28,950 pounds and of these, we planted 93,164 fish weighing 35,690 pounds.

Cutthroat Trout

Grace and McCall hatcheries transferred 438,630 cutthroat trout to this station and we subsequently planted 202,986 fish weighing 8,240 pounds. The loss of these fish was from IHN Virus.

Brown Trout

Mackay and Grace hatcheries transferred 249,204 brown trout to Hagerman and of these, 218,326 fish weighing 4,890 pounds were planted.

Fall Chinook Salmon

Mackay Hatchery transferred 428,975 fall chinook salmon to Hagerman and later, 381,251 fish weighing 17,224 pounds were stocked.

Coho Salmon

Instead of eggs this year, fingerling coho salmon were started by American Falls and Quinalt (Washington) hatcheries and transferred to Hagerman. We received 1,101,131 fingerlings and of these, 904,674 fish weighing 9,960 pounds were stocked.

Grayling

Ashton Hatchery transferred 60,000 grayling fry to Hagerman but because of the small size and problems with starting them on feed, only 6,500 survived for planting into two mountain lakes.

FISH HEALTH

Proliferative Kidney Disease was the major problem this year, with no cure and no control known. The loss attributed to this disease was 232,000 rainbow trout, plus the 804,000 that were destroyed. Where the disease came from is not known and why it ended up at Hagerman Hatchery is not known. The raceways containing the infected fish were sterilized with chlorine.

Another problem disease this year was Infectious Hematopoietic Necrosis (IHN), a viral disease. IHN caused high mortalities in the rainbow and cutthroat trout. Approximately 850,000 fish of both species were lost to this disease. The only known treatment is to thin the populations of fish **in** each infected raceway.

Another viral disease that was present at this hatchery was Infectious Pancreatic Necrosis (IPN). There has been some discussion of the correct diagnosis of IHN and IPN, but, in any case, there is no known control and, as in IHN, thinning is the only method of limiting losses. The loss attributed to this disease was 150,000 fish.

A recurring disease that caused mortality was Bacterial Gill Disease. Losses from this disease were 100,000 fish. A treatment of Purina 4X and Cutrine or Benzylkonium Chloride and Cutrine usually helped, but keeping the raceways clean with adequate flows of water was the best solution.

In the hatchery incubation building where the incubation of eggs and the first month and half of rearing takes place, the small fingerlings became infected by the protozoan "Costia", causing a loss of 100,000 fish. A treatment of salt and formalin usually took care of the problem.

Furunculosis was found in a raceway of cutthroat trout and a loss of 30,000 fish was attributed to this disease.

Since the vaccination program for Enteric Redmouth disease (ERM) was started, there has been no ERM diagnosed at this station.

The ever present populations of seagulls, night herons, blue herons, kingfishers and ducks bring on an unseen loss of approximately 250,000 fish. The birds also contribute to the spread of diseases between raceways. A combatant that has been used and has helped at this station was bird wires strong over one-third of the larger raceways. The rest of the wires are scheduled for construction within a few months.

FISH TRANSFERS

Table 1 includes all transfers of fish from Hagerman Hatchery to other stations.

Table 1. Fish transfers from Hagerman Hatchery, October 1, 1981 - September 30, 1982.

Date	Species	Receiving Station	Number	Pounds	Size at Release (inches)
7/22/82	Rainbow	Kamiah	12,240	2,400	7-8
7/30/82	Rainbow	Eagle	12,240	3,600	8-10
7/30/82	Rainbow	McCall	9,180	2,700	8-10
8/02/82	Rainbow	Kamiah	8,160	2,400	8-10
8/05/82	Rainbow	Eagle	9,920	3,200	8-10
8/09/82	Rainbow	McCall	12,000	2,400	7-9
8/12/82	Rainbow	Eagle	11,340	2,100	7-9
8/16/82	Rainbow	Kamiah	9,720	1,800	7-9
8/16/82	Rainbow	McCall	12,960	2,400	7-9
8/17/82	Rainbow	Eagle	9,030	2,100	8-10
8/25/82	Rainbow	Mackay	25,312	56	11_2-2
TOTALS			132,102	25,156	

FISH RELEASES

The following are totals of fish planted in the different regions of the state from Hagerman Hatchery.

Region 1

Rainbow Trout - 53,110 fish -- 10,400 pounds
Fall Chinook Salmon - 38,707 fish -- 2,114 pounds

Region 2

Rainbow Trout - 128,570 fish -- 32,920 pounds

Region 3

Rainbow Trout - 359,536 fish -- 72,510 pounds
Cutthroat Trout - 164,840 fish -- 7,290 pounds
Brown Trout - 106,403 fish -- 1,730 pounds
Fall Chinook Salmon - 175,558 fish -- 8,535 pounds
Coho Salmon - 516,480 fish -- 9,300 pounds

Region 4

Rainbow Trout - 389,615 fish -- 65,793 pounds
Cutthroat Trout - 38,048 fish -- 956 pounds
Brown Trout - 111,923 fish -- 3,160 pounds
Fall Chinook Salmon - 151,536 fish -- 5,825 pounds
Coho Salmon - 8,160 fish -- 160 pounds
Grayling - 3,000 fish -- 1/4 pound

Region 5

Fall Chinook Salmon - 15,450 fish -- 750 pounds

Region 6

Rainbow Trout - 406,159 fish -- 46,650 pounds
Coho Salmon - 370,800 fish -- 3,650 pounds
Grayling - 3,500 fish -- 1 pound

SPAWNTAKING OPERATIONS

The spawntaking operation that the Hagerman Hatchery personnel were involved in was the kokanee salmon trap on the South Fork Boise River near Pine. Personnel assisted with the installation and removal of the trap. Trapped fish were taken to Eagle Hatchery for spawning.

FISH FEED UTILIZED

The fish feed used by Hagerman Hatchery came from Clear Springs Trout Company and Rangens, Inc.; both operate fish feed plants in Buhl, Idaho. Table 2 lists sizes, pounds and cost of feed used by Hagerman Hatchery.

Table 2. Sizes, pounds, and cost of fish feed utilized by Hagerman Hatchery, October 1, 1981 - September 30, 1982.

Size	Pounds Fed	Cost
Starter	100	28.19
No. 1	1,050	277.47
No. 2	2,500	656.86
No. 3	9,900	2,490.86
No. 4	37,100	7,925.35
No. 5	86,500	17,314.05
No. 6	56,860	10,340.80
No. 7	425,641	73,478.41
No. 8	83,097	16,024.58
7/32	50	11.50
Medicated Feed	7,500	3,199.68
TOTALS	710,298	131,747.75

Number of pounds of fish produced was 270,740. A conversion of 2.6 pounds of feed to produce a pound of fish was achieved and the cost per pounds of fish produced was 71¢.

MISCELLANEOUS ACTIVITIES

Hatchery personnel were involved in sage grouse check stations and assisted conservation officers with upland game bird patrol.

The usual number of high school and grade school classes were given tours of the hatchery.

Approximately 41,000 people visited the hatchery this year, involved in looking, fishing, or hunting in the immediate area.

ACKNOWLEDGEMENTS

Hatchery staffing during the fish year included:

Bud Ainsworth, Fish Hatchery Superintendent III; Bill Doerr, Fish Hatchery Superintendent I; Doug Knifong, Fish Culturist; Doug Anderson, Fish Culturist; Paul Smith, Fish Culturist; Sonia Uppiano, Bio-aide; Mike Black, Bio-aide; Melanie Wroten, CETA; Patty Kelly, CETA; Bob Ralstin, CETA; and Tami Kelly, CETA. Also, for a six month period, Fish Transport Operators Bill Fiscus and Ralph Taylor.